MICOM Technology Insertion Program

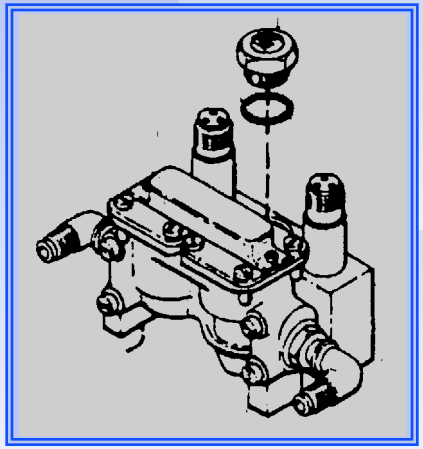
Today's Technology Upgrading PATRIOT's Spare and Repair Parts for Operation and Support Cost Reduction

Compressor Dehydrator

- Reverse engineering the regulator
- Insertion of protective circuitry
- Foster depot repair
- Create Technical Documentation Package
- $78K DBOF provided to PATRIOT

PATRIOT Power Supplies

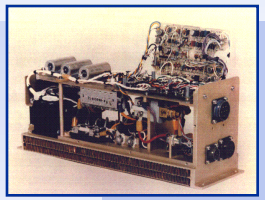
- New technology to reduce failures
- Open competition
- Create Technical Documentation Package
- Current state of practice technology
- DBOF to fund $500K - $1000K in FY 95



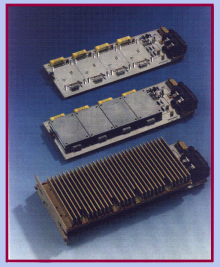
PATRIOT Candidates Under Analysis

- MODEM
- PATRIOT Cost Drivers
- Hard Copy Teleprinter

1970



1990



Industrial Operations Division

The MICOM Technology Insertion Program

Industrial Operations (IO) Division, System Engineering and Production Directorate (SEPD), Research, Development, and Engineering Center (RDEC), U.S. Army Missile Command.

The U.S. Army is actively pursuing efforts to reduce the Life Cycle Cost of weapon system. The Army has established the Operation and Support Cost Reduction (OSCR) program to identify and coordinate efforts in the areas of Spare Parts, Tech Base initiatives, Modification, Material Change, and Product Improvement Programs. The IO Division is responsible for representing MICOM in the Army Material Command (AMC) program, "Technology Insertion (TI) for Spares." This program is an activity under the Operation and Support Cost Reduction (OSCR) umbrella, across all major subordinate commands.

The TI program was initiated, as a means to introduce current technology into spare parts that is more reliable,less costly, and readily available. The material problems of obsolescence, reliability, and maintainability; are targeted areas, where reducing our spare parts costs can be achieved with the insertion of state-of-practice technology. Costs reductions may be achieved through simply reducing the cost of the spares with less costly up-to-date technology, by reducing the usage requirement through improving the reliability or to insert technology which is more easily maintained.

The MICOM Technology Insertion Program (cont'd)

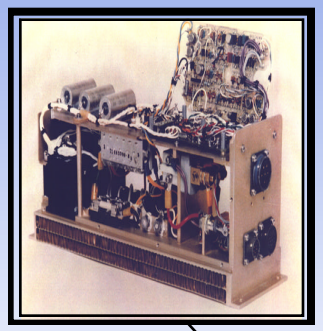
The Technology Insertion definition was designed for the primary reduction of O&S cost at the component or subassembly level. The use of state-of-practice technology and engineering re-design is proposed, to replace older, less reliable or more costly technology or to insert technology which is more easily maintained. In the process the replacement of inefficient and outdated and unreliable a short payback period. Technology Insertion applies to all types of spares and is intended to be application engineering and not research and development efforts.

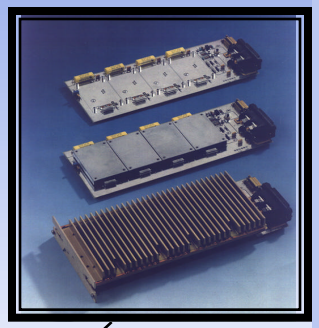
Candidates for development under the Technology Insertion program will be solicited from sources with insight into the cost drivers of spare parts. Project Managers, Labs, R&D Centers, Depots, maintenance functions, National Inventory Control Points, and Industry are identified as possible sources. The selection of projects will use Return-On-Investment and Savings-Investment-Ration as the basis for development of a prioritized list. Following an evaluation, the items will be available to the Stock Fund Manager, who would finance the projects as available funds allow.

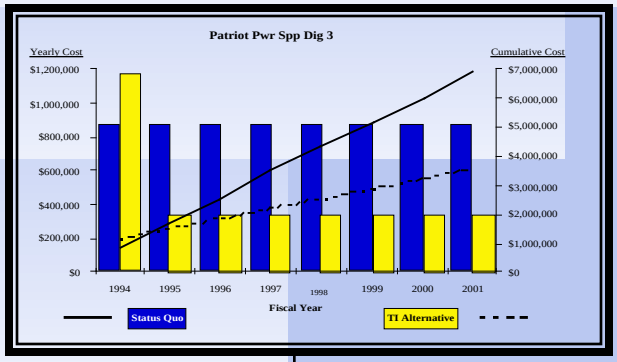
LIFE CYCLE COST ANALYSIS

TECHNOLOGY INSERTION COST MODEL TOOL

- SUPPORTS SPARE PART LOGISTICS AND O&S COST EVALUATION
- CONDUCTS ECONOMIC COST ANALYSIS
  - COMPARES ALTERNATIVE TO STATUS QUO
  - ACCOUNTS FOR UNIT PRICE, DEMAND, FAILURE FACTORS, MAINTENANCE COST, ETC.
  - PROVIDES TOTAL SAVINGS AND INVESTMENTS, RATE OF RETURN, SIR, NET PRESENT VALUE
  - PREDICTS OPERATION AND SUPPORT COSTS
- HELPS IN SELECTION OF TECHNOLOGY BASED ON SAVINGS RETURNED
- IDENTIFIES LOW COST OPTION
- IDENTIFIES AND RANKS SPARE PARTS COST DRIVERS
- ADAPTS TO OTHER LIFE CYCLE ANALYSIS PROBLEMS







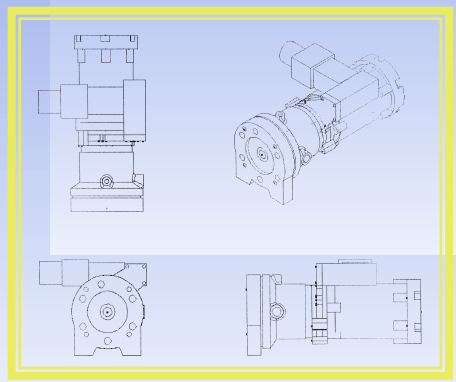
- O&S COST REDUCTION
- IMPROVEMENT THROUGH NEW TECHNOLOGY

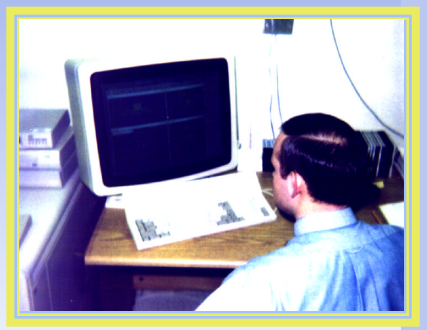
Industrial Operations Division

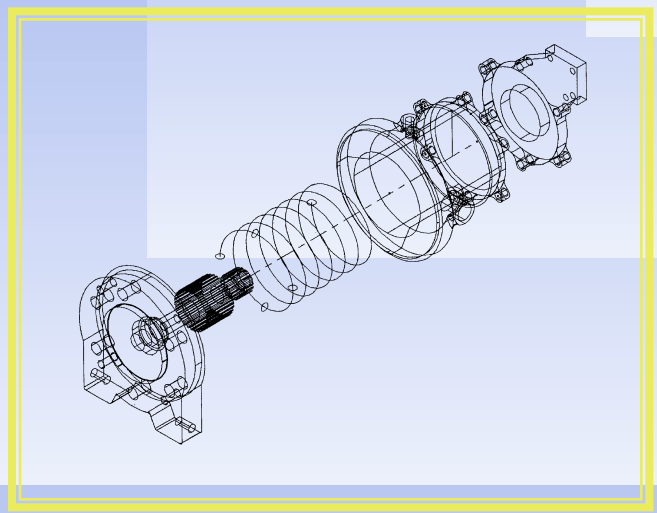
REVERSE ENGINEERING

CAPABILITIES:

- TECHNICAL DATA DEVELOPMENT
- SOURCE IDENTIFICATION
- MANUFACTURING / MATERIAL ID
- AID DEPOT UTILIZATION
- FOSTER COMPETITIVE REPAIR ACTIVITIES AND PROGRAMS
- DESIGN DOCUMENTATION







FACILITIES / EQUIPMENT:

- LAB SPACE AT BLDG 5400
- INTERGRAPH WORKSTATION WITH I / EMS SOLID MODELING SOFTWARE
- PRECISION MEASUREMENT TOOLS
- QUICK PROTOTYPING AVAILABILITY

SYSTEM SUPPORTABILITY ANALYSIS

- EVALUATE SYSTEM SUSTAINABILITY
  - OBSOLECENCE IDENTIFICATION
    - MICROCIRCUITS
    - MECHANICAL
    - ELECTRONIC
- ASSESSMENT METHODOLOGY
  - TDP QUALITY
  - ODS PROBLEMS
  - COST ESCALATION
  - SOURCE AVAILABILITY
  - MATERIAL SHORTAGES
- PROVIDE ALTERNATIVE SOLUTION
  - REDESIGN
  - REVERSE ENGINEERING
  - TECHNOLOGY INSERTION